

DETAILED ACTION

Election/Restrictions

1. The restriction and election of species as set forth in the previous Office Action dated October 28, 2008 has been withdrawn. Hence claims 1-11 are pending in the application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Harvey B. Jacobson, Jr. on April 13, 2010.

The application has been amended as follows:

In claim 1, line 4, the phrase "at least one of" has been deleted.

Also in claim 1, line 5, the term "and" has been replaced with the term "or".

Reasons For Allowance

3. The following is an examiner's statement of reasons for allowance: This application teaches: (1) aluminum fuel particles for propellant and explosive compositions and pyrotechnic charges, the aluminum fuel particles comprising a surface layer of a fluoride complex provided by treatment of the aluminum fuel particles with an

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aqueous solution of hydrofluoric acid and (i) a fluoride or (ii) a complex fluoride of at least one of an alkali metal and an alkaline earth metal and (2) a method of producing aluminum fuel particles having improved ignitability and burn rate, comprising treating the aluminum fuel particles with an aqueous solution of hydrofluoric acid and (i) a fluoride or (ii) a complex fluoride of at least one of an alkali metal and an alkaline earth metal to form a surface layer of a fluoride complex bound to the aluminum fuel particle. The closest prior art of record is US Patent 4,017,342, issued to Geisler et al. and US Patent 5,391,239, issued to Boulos. Geisler et al. teach modifying aluminum metal powders to improve their combustion efficiency as fuel for solid rocket propellants by exposing aluminum oxide coated aluminum metal powder to hydrogen fluoride gas but fails to teach or fairly suggest treating the aluminum metal powder with an aqueous solution of hydrofluoric acid and (i) a fluoride or (ii) a complex fluoride of at least one of an alkali metal and an alkaline earth metal as claimed by applicants. Boulos teaches a method for forming a conversion coating on an aluminum substrate comprising treating the aluminum substrate with hydrofluoric acid and alkali metal fluorides to form a corrosion resistant coating but fails to teach or fairly suggest aluminum fuel particles comprising a surface layer of a fluoride complex provided by treatment of the aluminum fuel particles as claimed by applicants. Accordingly, this application is allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Klemanski whose telephone number is (571) 272-1370. The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Helene Klemanski/
Primary Examiner, Art Unit 1793